Exhibit

Process Flow

Cover + 8 Pages

Note: Within this document, the term AEC (Alternate Exchange Carrier) is used. When the term AEC is read, substitute the term TC (Telecommunications Carrier). This change reflects a move toward adoption of standard language.

Ameritech 9-1-1 Data Base Integrity Processes in a Multiple Local Exchange Provider Environment

General (Joint Responsibility between Ameritech and AEC)

Interconnection Contract and 9-1-1 Agreement

(90 days prior to service - notify AEC of 9-1-1 DB Mechanization Needs)

Ameritech IIS Introduces 9-1-1 Service Capabilities to AEC

9-1-1 Operations Organization Triggered

Begin AEC 9-1-1 Service Planning & Implementation Process

Data Base Specific

1 If AEC is Reseller, go to R on Page 2

If AEC is Facilities-based, AEC Chooses 9-1-1 DB Interface:

1- File Transmission in NENA Format — AEC acquire NENA Standards definition, AM provide State Addendum info. See also Note 1

2- Diskette Files in NENA Format

3- Manual Forms => Page

All require Field Definition coordination with AEC [AM]

AEC Develop M&P for Manual Forms, or M&P and Software for Transmission, Diskette options

AEC introduce Addressing & Routing File (ARF) verification process

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Legend:

1 Milestone Point

Note 1: Development in progress on software to convert NENA Exchange Standard record content to the field content needed for processing records.

From Page 1 ——

▼

2 E — Start AEC DB Provisioning Test Runs [Joint]

Start -30 days to Service

→ (Use predefined test record set w/MSAG test records)

▼

Corrections (may require multiple cycles)

▼

Correct Record Results?

— No Yes —

3 E

▼

Sign-off on Format (Escalation within AM and AEC)
Protocol
Field Content

Service Preparation ▼

Ongoing Operations

▼

4 E — Start Live Data Base Delivery [AEC]

▼

Daily Business Day Data Sends [AEC] ═══: to Page 3

→ Ameritech Gateway (Page 3)

Pre-existing 9-1-1 Extraction programs

▲

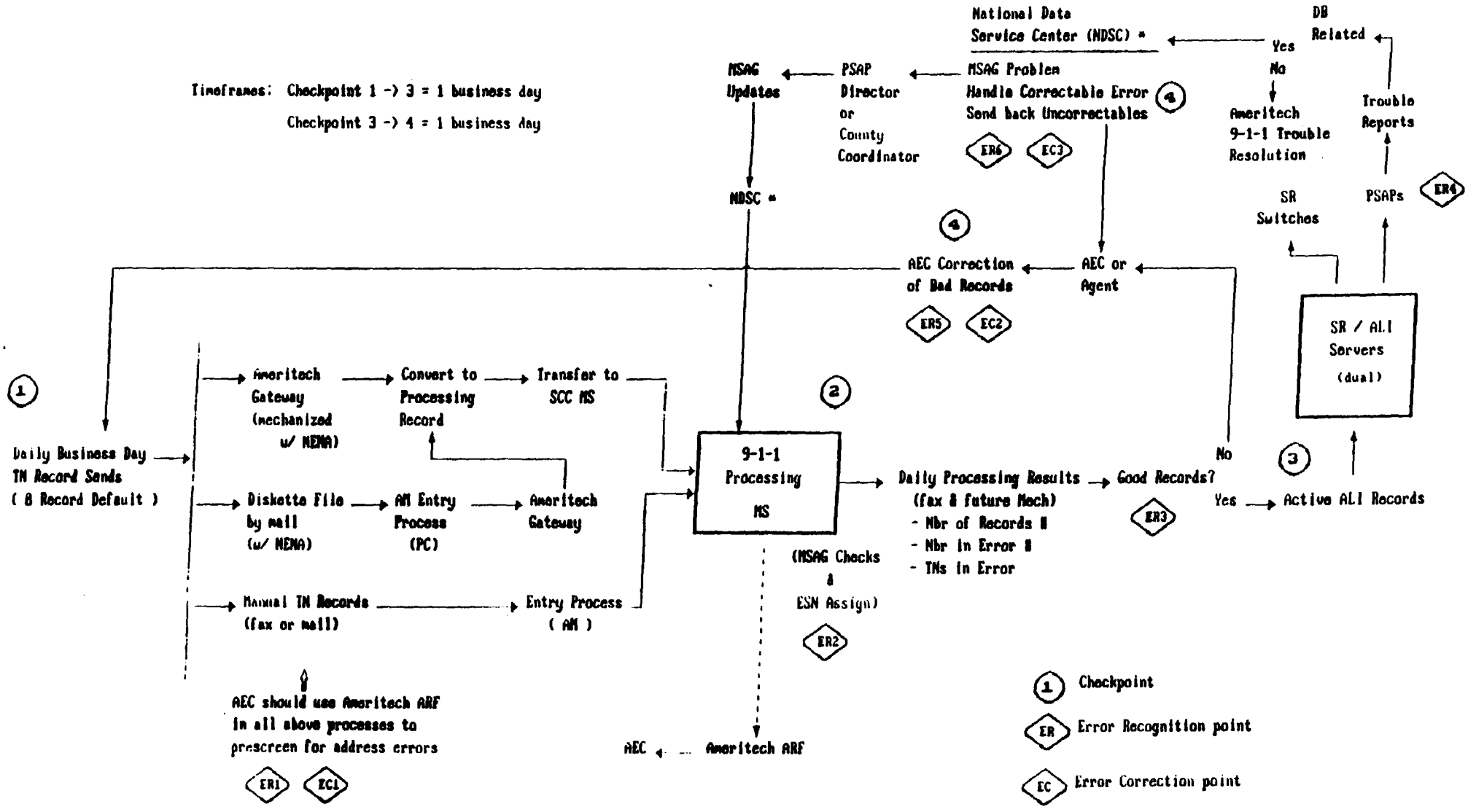
R E — If Reseller, Ameritech Service Order Process

with DPA and DPS FIDs

(through Wisconsin BIS Service Order Center)

Ameritech 9-1-1 Data Base Integrity Processes in a Multiple Local Exchange Provider Environment

- 9-1-1 Data Flow -



RCH 11/96

Process Flow Exhibit

The Milestones: 1

MILESTONE 1: Database Interface Choice
Responsibility: TC

Whether choosing either a mechanized or manual process, the TC must complete field content definition and testing, with records jointly defined with Ameritech. If the TC has mechanized interface software prepared to produce records prescribed in the NENA data exchange standards or if manual record updates are planned, this point begins the testing process noted and depicted above. The TC will need to prepare procedures for their associated internal processes which address the method(s) chosen for 9-1-1 database updates.

MILESTONE 2: Start TC Database Provisioning Test Runs
Responsibility: TC (primary), jointly with Ameritech

Testing should typically begin 30 days prior to live service. Repeated cycles of testing may be required.

MILESTONE 3: Database Development Sign Off
Responsibility: TC and Ameritech

When both Ameritech and the TC agree that database processes are ready, a formal sign-off completes database service preparations. This ensures that both parties are satisfied that the data flow from the TC to the Ameritech 9-1-1 database is capable of being accurate and complete.

Process Flow Exhibit

The Checkpoints: (1)

CHECKPOINT 1: Daily Data Base Delivery
Responsibility: TC
Daily business day sends of TN records from the TC. This includes zero record sends when no updates are necessary, which provides for daily positive reporting.

CHECKPOINT 2: Ameritech's Processing Completes for each cycle
Responsibility: Ameritech
The MS system processes each day's TN record input and generates ALI and SR file output, with error information for any records that did not process properly.

CHECKPOINT 3: Active ALI and SR Records Available
Responsibility: Ameritech
The SR/ALI databases are updated with the current input. The checkpoint occurs within 1 business day of Checkpoint 1, for all non-error input records.

CHECKPOINT 4: TC and Ameritech Error Correction
Responsibility: Ameritech and TC
Correctable errors are expected to be turned around within 1 business day of Checkpoint 3.

Process Flow Exhibit

The Error Recognition Points: 

ERROR RECOGNITION POINT 1 (ER1): TC Address Prescreening
Responsibility: TC

TC receives Addressing & Routing Files (ARF) from Ameritech to assist in prescreening the TC 9-1-1 TN records for 9-1-1 valid addressing. This allows the TC to recognize and correct addressing problems before the records are sent to Ameritech's 9-1-1 database process, thereby lowering the potential of errors and accomplishing correct updating of the 9-1-1 data bases in minimal timeframes.

ERROR RECOGNITION POINT 2 (ER2): Database & Address Screening
Responsibility: Ameritech

When the 9-1-1 system processes takes in the Ameritech or TC TN records to update the databases, a check is made against the Master Street Address Guide (MSAG). This validates the TN record's address information, matching to an entry in the MSAG. When a match is found, the telephone number is associated with an ESN (Emergency Service Number). This provides the relationship between the telephone number and the routing code (ESN) allowing the Ameritech Selective Routing switch to properly route a 9-1-1 call to the proper PSAP. Any errors at this point are identified in error files for appropriate action.

The MS database processing includes other checks to determine the appropriateness of the input record. For example, if the record is marked as an "insert", the process checks to see if there is already an existing record; if so, then it is an error. If the record is marked as a "change" or "delete", then an existing record should reside in the database; if not, the record will be flagged as an error.

ERROR RECOGNITION POINT 3 (ER3): Daily Processing Results
Responsibility: Ameritech

After daily processing results are reported, both Ameritech and the TC have information on overall results for the last processing cycle. If it is a mechanized update process, the TC will receive a reporting containing the number of records received, the number of records applied to the database, the number of errors, and the TNs in error. If it is a manual update process, the TN form in error is returned to the TC within one business day.

Appendix B

List of Acronyms

Cover + 1 Pages

Process Flow Exhibit

The Error Correction Points: 

ERROR CORRECTION POINT 1 (EC1): TC Address Correction
Responsibility: TC
Represents the opportunity described in ER1 for the TC to correct customer addressing at the very beginning of the 9-1-1 database process.

ERROR CORRECTION POINT 2 (EC2): TC Daily Processing Correction
Responsibility: TC
TC error correction process to deal with those error conditions recognized at ER5. Corrections submitted in next daily update.

NOTE: Also performed by Ameritech on its input data.

ERROR CORRECTION POINT 3 (EC3): NDSC Corrections/Recognition
Responsibility: Ameritech via NDSC
Correctable errors are handled at the NDSC. Uncorrectable cases are returned to the source party, such as the TC for their action. The usual TC approach is to provide an updated record to correct the problem.

Appendices

Appendix A

Glossary of 9-1-1 Terms

Cover + 7 Pages

Glossary of 9-1-1 Terms

ABANDONED CALL

A call that rings into a Public Service Answering Point (PSAP) but is terminated by the caller before it is answered.

ACCESS LINE

The telephone service line connecting a subscriber's telephone to the telephone company's switching office.

ALTERNATE ROUTING (AR)

A feature which allows 9-1-1 calls to be routed to a designated alternative location if all 9-1-1 exchange lines to the primary PSAP are busy, or the primary PSAP closes down.

AUTOMATIC LOCATION IDENTIFICATION (ALI)

A feature that forwards the name and address associated with the calling party's telephone number (identified by ANI as defined below) to the PSAP for display. Additional telephones with the same number as the calling party's (secondary locations, off premise extensions, etc.) are identified with the address of the telephone number at the main location.

AUTOMATIC NUMBER IDENTIFICATION (ANI)

A feature which allows the number of the calling party to be forwarded to the PSAP for display.

BLOCKED CALL

A call that fails to reach its intended destination.

BUSY TONE

An audible signal indicating a call cannot be completed because the called access line is busy. There are two types of busy signal: one applied 60 times per minute and a fast busy applied at 120 times per minute.

CALL HANDLING AGREEMENT

A written cooperative agreement entered into by all participating, adjacent and public safety agencies. This agreement stipulates that an emergency unit will be dispatched and will render service without regard to normal jurisdictional boundaries.

Glossary of 9-1-1 Terms

CALL TRANSFER

An 9-1-1 feature which allows the PSAP telecommunicator receiving a call to transfer that call to the appropriate public safety agency or other provider of emergency services.

CENTRAL OFFICE

A switching unit in a telephone system which provides service to the general public, having the capability of terminating and interconnecting subscriber lines and/or trunks.

CENTREX SERVICE

A telephone company central office service that provides private branch exchange type features. When making an emergency call from a Centrex phone, it may be necessary to dial an outside access code before dialing the 9-1-1 emergency number.

COIN-FREE ACCESS

The ability to access "9-1-1" or "O" for Operator on pay telephones without depositing money.

COMPUTER AIDED DISPATCH (CAD)

The use of a computer to aid in dispatch and/or tracking of police or fire units.

CONTROL OFFICE

A telephone company central office that controls the switching of ANI and selective routing information to the appropriate PSAP. The control office serves as a tandem switch in the 9-1-1 network. (Refer to Selective Router Switch)

CUSTOMER-OWNED PAY TELEPHONE SERVICE (COCOTS)

The pay telephone stations owned and operated by parties other than the local exchange carriers.

CUSTOMER PROVIDED (OR PREMISES) EQUIPMENT (CPE)

The equipment owned and maintained by the customer.

DATABASE

A collection of data which supports 9-1-1. The database includes ANI/ALI information for each customer in the system.

Glossary of 9-1-1 Terms

DATABASE PROVIDER

An entity contracted to install and maintain the 9-1-1 database.

DEDICATED TRUNKING

The trunking dedicated to a designated 9-1-1 network. (See Trunk.)

DEFAULT ROUTING

A feature activated when incoming 9-1-1 calls cannot be selectively routed due to a failure of the ANI feature, garbled digits or other cause. Such incoming calls are routed to a "default" PSAP.

DIRECT DISPATCH

An 9-1-1 service that allows the PSAP telecommunicator to dispatch the appropriate response unit(s).

DIRECT TRUNKING

An arrangement where a telephone trunk connection has no intermediate switching points between the originating central office and PSAP location. The facilities utilized in this arrangement may be either intra-exchange or inter-exchange.

DISASTER RECOVERY PROCEDURES

The emergency procedures established for handling equipment failure or network blockage.

DISPATCH CENTER/RADIO DISPATCH CENTER

The location from which a public or private safety agency's mobile units are dispatched.

E9-1-1 TANDEM OFFICE

A telephone company switching office equipped with 9-1-1 service capabilities. This switch serves as a tandem office for 9-1-1 calls from other local offices in the service area.

Glossary of 9-1-1 Terms

EMERGENCY SERVICE NUMBER (ESN)

A Selective Routing (SR) code assigned by the Company to each telephone number in an exchange where SR is provided to route E-9-1-1 calls to an appropriate PSAP. The ESN is associated with the street address ranges or other mutually agreed upon routing criteria and defines the set of emergency numbers (e.g. police, fire, medical) responsible for providing emergency service in a primary PSAP and possibly one or more secondary PSAPs.

ENHANCED 9-1-1 (9-1-1)

A 9-1-1 service offering which provides completion of 9-1-1 calls via dedicated trunking facilities to all primary PSAPs and to secondary PSAPs that are equipped to display ANI information on Company or customer provided terminal equipment. This offering is available via specific service feature and/or service feature combinations which may or may not be available with other 9-1-1 Service classifications.

FIXED TRANSFER

A feature which enables a PSAP attendant to transfer incoming 9-1-1 calls to Secondary PSAPs by use of a single button on the Display and Transfer Unit.

FORCED DISCONNECT

Permits the PSAP attendant to release an 9-1-1 connection though the 9-1-1 calling party has not hung up, thereby preventing intentional jamming of the 9-1-1 central office lines.

JEOPARDY

A jeopardy condition exists when a critical installation interval is at risk of not being completed by the scheduled deadline.

JURISDICTION AREA

The specific boundaries in which a service provider has authority to operate.

GRADE OF SERVICE

The probability (P), expressed as a decimal fraction. of a telephone call being blocked. P.01 is the grade of service reflecting the probability that one call out of one hundred will be blocked.

Glossary of 9-1-1 Terms

LOCAL EXCHANGE CARRIER (LEC)

Any person or entity that is engaged in the provision of telephone exchange service or exchange access, excluding persons or entities engaged in the provision of commercial mobile service.

LOCAL LOOP

A channel between a customer's network interface and its serving central office.

MASTER STREET ADDRESS GUIDE (MSAG)

The computerized geographical file which consists of all streets and address ranges within the designated 9-1-1 system area.

NETWORK

The aggregate of transmission and switching systems. It is an arrangement of loops, trunks and associated switching facilities.

NUMBERING PLAN AREA (NPA) CODE

So that each telephone can have a distinctive telephone number, the U.S. has been divided into areas, and each area has a distinctive three-digit code. To call a phone in another area, the customer dials the NPA code before dialing the local seven-digit telephone number.

NXX

The three-digit code which appears as the first three digits of a seven-digit telephone number.

9-1-1 CALL

Any telephone call initiated by dialing "9-1-1".

OVERFLOW

An alternate answering point when a call is blocked or re-routed due to excessive traffic.

PRIVATE LINE

A telephone line used only for communication between dedicated points which does not connect with the public telephone system.

Glossary of 9-1-1 Terms

PUBLIC SAFETY AGENCY

The state, or any unit of municipal or county government which is authorized to provide emergency services.

PUBLIC SAFETY ANSWERING POINT (PSAP)

The answering location for 9-1-1 calls originating in a given area. A PSAP may be designated as Primary or Secondary, which refers to the order in which calls are directed for answering. Calls are first directed to the Primary PSAPs for response. Secondary PSAPs receive calls on a transfer basis only, and generally serve as a centralized location for a particular type of emergency call. PSAPs shall be staffed by employees or agents of service agencies such as police, fire or emergency medical or a common bureau serving a group of such entities.

ROUTE DIVERSITY

Two or more separate routes of communication arranged to minimize the possibility of total communication interruption in the event of facility damage.

SELECTIVE ROUTING

A feature which allows 9-1-1 calls to be routed to the designated Primary PSAP based upon the identification number of the calling party.

SELECTIVE TRANSFER

Provides a PSAP with the ability to transfer an incoming call to another responding agency by depressing a single button labeled with type of agency, e.g. fire. on the Display and Transfer Unit. Selective Transfer is only available when Selective Routing is provided.

SILENT CALL

A call where the answering agency gets no verbal response from the caller.

SPEED CALLING

A feature which enables the customer to call certain preset numbers via abbreviated dialing.

TANDEM TRUNKING

An arrangement whereby an 9-1-1 call is routed from a central office to the 9-1-1 tandem control office or from the 9-1-1 tandem control office to the PSAP.

Glossary of 9-1-1 Terms

TELECOMMUNICATIONS CARRIER (TC)

Any person or entity engaged in the provision of telephone exchange service or exchange access service within a defined geographic area.

TELECOMMUNICATIONS DEVICE FOR THE DEAF (TDD)

An instrument that provides written communication over the switched network for the hearing or voice impaired by use of a typewriter style keyboard and other special equipment.

TELECOMMUNICATOR

A person who is trained and employed in public safety telecommunications. The term may apply to complaint takers, operators, dispatchers, radio operators, data terminal operators, or any combination of such functions in a PSAP.

TRANSFER

A feature allowing a PSAP telecommunicator to transfer E9-1 -1 calls.

TRUNK

A circuit used to connect a call between central offices.

UNINTERRUPTIBLE POWER SOURCE (UPS)

An emergency power source which can detect any change in power line frequency or voltage and automatically compensate for these changes. It supplies additional power or converts to an auxiliary power source without any loss of voltage or frequency.

Appendix B

List of Acronyms

Cover + 1 Pages

Acronymns

ACD	Automatic Call Distributor
ALI	Automatic Location Identification
APCO	Associated Public-Safety Communications Officer
ANI	Automatic Number Identification
AR	Alternate Routing
CAD	Computer Aided Dispatch
CFA	Coin Free Access
CO	Central Office
COCOT	Customer-Owned Coin-Operated Telephones
CPE	Customer Premise Equipment
DMS	Data Management System
DR	Default Routing
9-1-1	Enhanced 9-1-1
ESN	Emergency Service Number
ETSA	Emergency Telephone Service Act
ETSB	Emergency Telephone Service Board
ETSC	Emergency Telephone Service Committee
FCC	Federal Communications Commission
FX	Foreign Exchange
LEC	Local Exchange Carrier
MBT	Michigan Bell Telephone Company
MPSC	Michigan Public Service Commission
MSAG	Master Street Address Guide
NENA	National Emergency Number Association
NPA	Numbering Plan Area Code
PBX	Private Branch Exchange
PREMIS	Premises Information System
PSAP	Public Safety Answering Point
SR	Selective Routing
TC	Telecommunications Carrier
TDD	Telecommunications Device for the Deaf
TN-LOAD	Telephone Number Load
UPS	Uninterruptible Power Source

Appendix C

AEC 9-1-1 Planning & Implementation Process

Cover + 8 Pages

Note: Within this document, the term AEC (Alternate Exchange Carrier) is used. When the term AEC is read, substitute the term TC (Telecommunications Carrier). This change reflects a move toward adoption of standard language.

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Alternate Exchange Carrier 9-1-1
Service Process

- New Customer, by State -

New AEC Customer for an AM state
↓
IIS Account Manager → Service Alert Notice @ → IIS Service Manager → New Customer Meeting or Call

IIS Account Manager ⋮→ Provide 9-1-1 contract to AEC

IIS Service Manager
(contact AEC 9-1-1 person, discuss basics of service, provide 9-1-1 Questionnaire)
↓
Service Alert Notice @
↓
9-1-1 Operations
(assigns Project Mgr)

New Customer Meeting or Call
- AEC Customer Reps
- IIS Account Mgr
- IIS Service Mgr
- 9-1-1 Operations

(discuss project, activities, & finalize Questionnaire)

(Results)
- Customer Questionnaire
- Basic Project Schedule
- Service Request Memo @
- Notification to County and/or PSAPs

→ [A]

[Day 0] [Day 7*]

@ Service Alert Notice - initial Email notice of new AEC customer from IIS to all interested parties

@ [illegible] memo - temporary paper request for service

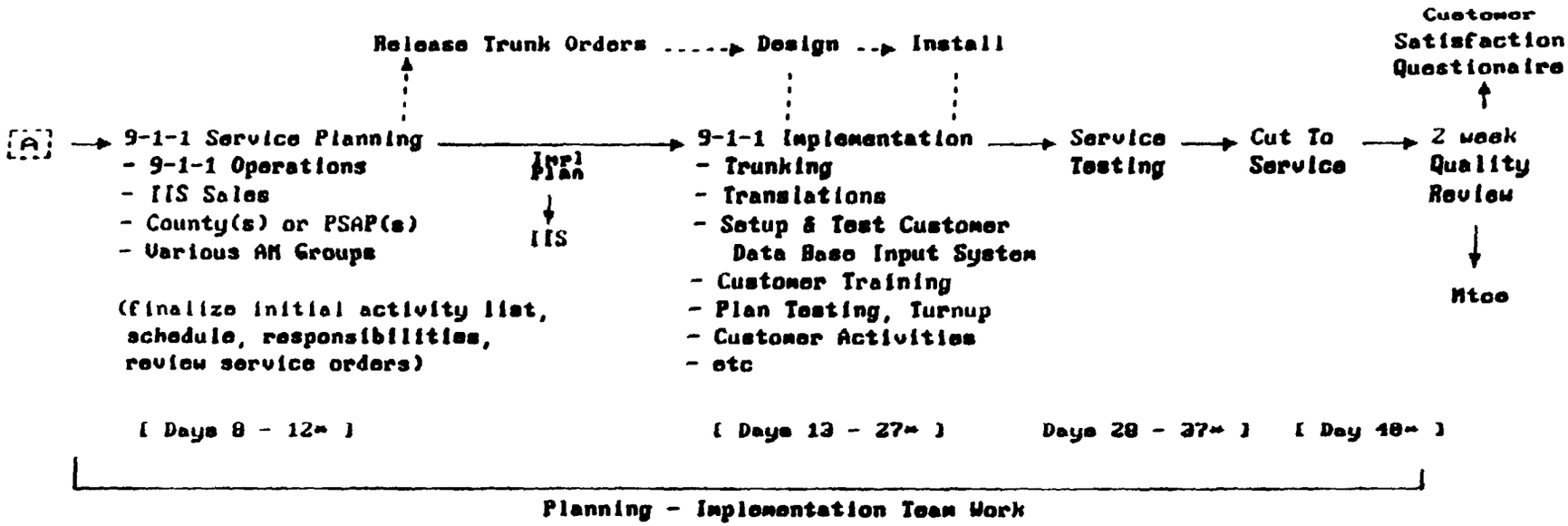
* Estimated in calendar days for planning purposes

6 weeks minimum is typical (if no unusual circumstances)

Ameritech

Alternate Exchange Carrier 9-1-1 Service Process

- New Customer, by State -



@ Service Alert Notice - initial Email notice of new AEC customer from IIS to all interested parties

Service Request memo - temporary paper request for service [illegible] including Questionaire info.

* Estimated in calendar days for planning purposes

6 weeks minimum is typical (if no unusual circumstances)

Page 2 of 2

How To Establish Ameritech AEC 9-1-1 Service - Basic Task List

(minimum 40 calendar days on average - see day intervals on flow)

Interim Process Flow (see diagram)

When an Alternate Exchange Carrier (AEC) plans initial service in an Ameritech state, the general sequence of events is as shown on the process flow. Many of these same steps would be required for major additions (new service areas, new AEC switches), as well.

This process flow is considered Interim because some shifting of actions between steps in the process are expected to occur as further development is accomplished and the process is detailed.

When the new AEC (for a given state) approaches IIS Sales, the process is initiated and progresses as follows:

AEC Customer / IIS Account Manager

- as IIS Sales determines that an AEC is becoming active in a state, they prepare and distribute a Service Alert Notice to the IIS Serviec managers (see example and outline attached).

IIS Service Manager

- IIS Service Manager discusses basics of 9-1-1 service with the AEC and provides AEC with Ameritech AEC 9-1-1 Service questionnaire for response back to Ameritech
- IIS Sales discusses general rate structure for AEC 9-1-1
- IIS Sales brings in 9-1-1 Operations personnel as necessary to assist with technical aspects of 9-1-1 service
- ID basic service area(s) planned by the AEC, and discuss what parts of this area currently provide 9-1-1 service
- discuss Access Line customer charging requirements for the state(s)
- discuss data base standards, testing needs
- discuss general timeframes needed for 9-1-1 service provision
- IIS Service Manager updates and sends Service Alert Notice to 9-1-1 Operations (per distribution list by state provided)

9-1-1 Operations

- Area Manager assigns 9-1-1 Customer Service Manager to serve as the Project Manager for this project
- Project Manager contacts IIS Service Manager, jointly set up New Customer meeting or conference call
- 9-1-1 Operations Project Manager sets up internal 9-1-1 Service Planning meeting or conference call to follow New Customer session date

New Customer Meeting (called and chaired by IIS Service Manager)

- ID AEC switching points, locations

- ID 9-1-1 Control Offices involved, locations

- ID trunking specifics, AEC switch(s)-> Ameritech Control Office(s)
  - ID meet points in network

  (Important: the AEC interface must be defined in Ameritech's trunking design systems, and the appropriate assignments documented on the 9-1-1 Questionnaire before circuit orders can be issued)

- define the service planning and implementation activity sequence

- define the Addressing and Routing data base relationships

- define the AEC TN record preparation and provision process
  - discuss options for delivery of TN records to Ameritech
  - ID the TN record transfer process to be used (1st choice is mechanized transmission, then disk, then manual paper)
  - provide AEC with the forms and definitions for data base work (Addressing References, Rate Center/SR listings, etc)

- define the trunking and 9-1-1 trouble reporting processes

- ID Trunking and Data Base activities and tentative schedules for service

- discuss and detail the AEC actions with the Utilities Commission regarding 9-1-1 service, customer charging aspects, specific 9-1-1 features applicable to the service area(s)

- make AEC customer aware of Utilities and County / PSAP contacts, and that Ameritech 9-1-1 Operations will initiate and coordinate contacts with Ameritech's customers at the County and/or PSAP level. Project Manager determine if County needs educational session for PSAP managers.

- complete AEC 9-1-1 Questionnaire to provide customer service profile

Internal Results of this step:

- completed Customer Questionnaire document

- basic Project Schedule

- IIS Service Manager generates Service Request Memo
  - temporary Email with Questionaire info
  - 9-1-1 Operations generates Trunk Orders, begins chargeback (replaced by ASR process when ready)

- 9-1-1 Operations begins notification to Counties/PSAPs
  - ID default call delivery points